

We claim:

1. In a computer system, said system including a plurality of system control processors,  
 5 each said system control processor with a plurality of activation states, said system control processors controlling a plurality of other processors ( OPs ) in said system, each said OP with a plurality of activation states, a method, comprising the steps of:  
     providing a reset function for said system control processors enabling said system control processors to change the activation state of other system control  
 10 processors and OPs;  
     setting the activation state of a system control processor to active, said active state indicating a functioning processor fully integrated into system operations;  
     setting the activation state of a system control processor to standby, said standby activation state indicating a functioning processor partially integrated into said system  
 15 operations;  
     detecting an error in one of said OPs with said system control processor set to an active activation state;  
     detecting said error in one of said OPs with said system control processor set to a standby activation state; and  
 20 altering the activation state of said OP using said system control processor set to an active activation state and said system control processor set to a standby activation state.
2. The method of claim 1 comprising the further step of:  
 25 changing the activation state in the OP in which an error was detected from an active state to a reset state, said reset state indicating a non-functioning processor not integrated into said system operations.
3. The method of claim 2 comprising the further step of:  
 30 changing the activation state of an OP from a standby activation state to an active activation state to take the place in said system of said OP placed into a reset activation state.
4. The method of claim 1 wherein said OPs are located on Input/Output ( IO ) cards  
 35 interfaced with said system, said IO cards including software for reporting IO card status and OP status to said system control processor set to an active activation state and said system control processor set to a standby activation state.

5. The method of claim 4 wherein said error is detected by said software and reported to said system control processor set to an active activation state and said system control processor set to a standby activation state.

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6. The method of claim 5 wherein said error is detected by polling said OPs to check status.

7. In a computer system, said system including a plurality of system control processors, each said system control processor with a plurality of activation states, said system control processors controlling a plurality of other processors ( OPs ) in said system, each said OP with a plurality of activation states, a method, comprising the steps of:

10 providing a reset function for said system control processors enabling said system control processors to change the activation state of other system control processors and OPs;

15 setting the activation state of a system control processor to active, said active state indicating a functioning processor fully integrated into system operations;

20 setting the activation state of a system control processor to standby, said standby activation state indicating a functioning processor partially integrated into said system operations;

detecting an error in one of said OPs with said system control processor set to an active activation state;

failing to detect said error in one of said OPs with said system control processor set to a standby activation state; and

25 altering the activation state of said system control processor set to an active activation state using said system control processor set to a standby activation state.

8. The method of claim 7 comprising the further step of:

30 changing the activation state in said system control processor set to an active activation state to a reset state, said reset state indicating a non-functioning processor not integrated into said system operations.

9. The method of claim 8 comprising the further step of:

35 changing the activation state in the system control processor set to a standby activation state from a standby state to an active state.

10. In a computer system, said system including a plurality of components, said components including a system control processor with a plurality of activation states set to an active activation state, said active activation state indicating a functioning processor fully integrated into system operations, a system control processor with a plurality of activation states set to a standby activation state, said standby activation state indicating a functioning processor partially integrated into said system operations, and a system component with a reset function, said reset function enabling said system component to change the activation state of a system control processor, said system control processors controlling a plurality of other processors ( OPs ) in said system, a method, comprising the steps of:

detecting an error in said system control processor set to an active activation state with said system control processor set to a standby activation state;

verifying said error in said system control processor set to an active activation state with said system component with a reset function; and

altering the activation state of said system control processor set to an active activation state using said system control processor set to a standby activation state and said system component with a reset function.

11. The method of claim 10 comprising the further step of:

changing the activation state in said system control processor set to an active activation state from an active state to a reset state, said reset activation state indicating a non-functioning processor not integrated into said system operations.

12. The method of claim 11 comprising the further step of:

changing the activation state in said system control processor set to a standby activation state from a standby activation state to an active activation state.

13. The method of claim 12 comprising the further step of:

designating a system control processor in a standby activation state to replace the original system control processor set to a standby activation state that became the active system control processor.

14. In a computer system, said system including a plurality of components, said components including a system control processor with a plurality of activation states set to an active activation state, said active activation state indicating a functioning processor fully integrated into system operations, a system control processor with a

plurality of activation states set to a standby activation state, said standby activation state indicating a functioning processor partially integrated into said system operations, and a system component with a reset function, said reset function enabling said system component to change the activation state of a system control processor, said system control processors controlling a plurality of other processors ( OPs ) in said system, a method, comprising the steps of:

detecting an error in said system control processor set to an active activation state with said system control processor set to a standby activation state;

attempting and failing to verify said error in said system control processor set to an active activation state with said system component with a reset function; and

altering the activation state of said system control processor set to a standby activation state using said system control processor set to an active activation state and said system component with a reset function.

15. The method of claim 14 comprising the further step of:

changing the activation state in said system control processor set to a standby activation state from a standby activation state to a reset activation state, said reset activation state indicating a non-functioning processor not integrated into said system operations.

16. The method of claim 15 comprising the further step of:

designating a system control processor in a standby activation state to replace the original system control processor set to a standby activation state that was changed to a reset activation state.

17. In a high availability computer system, a medium holding computer-executable steps for a method, said method comprising the steps of:

providing a plurality of system control processors, each said system control processor with a plurality of activation states, said system control processors controlling a plurality of other processors ( OPs ) in said system, said OPs with a plurality of activations states;

setting the activation state of a system control processor to active, said active activation state indicating a functioning processor fully integrated into said system operations;

setting the activation state of a system control processor to standby, said standby activation state indicating a functioning processor partially integrated into said system operations;

detecting an error in one of said OPs with said system control processor set to an active activation state;

failing to detect said error in one of said OPs with said system control processor with a standby activation state; and

5        altering the activation state of said system control processor set to an active activation state using said system control processor set to a standby activation state.

18. The medium of claim 17 wherein said method changes the activation state in said system control processor set to an active activation state from an active activation state  
10        to a reset activation state, said reset activation state indicating a non-functioning processor not integrated into said said system operations.

19. The medium of claim 18 wherein said method changes the activation state of said system control processor set to a standby activation state from a standby activation state  
15        to an active activation state.

20. The medium of claim 19 wherein said method comprises the further step of:  
      using a system component with a reset function in conjunction with said system control processor set to a standby activation state to alter the activation state of said  
20        system control processor set to an active activation state.

21. An electronic device comprising:  
      a system control processor set to an active activation state, said active activation state indicating a functioning processor fully integrated into the operations of said  
25        device;

      a system control processor set to a standby activation state, said standby activation state indicating a functioning processor partially integrated into the operations of said device;

      a plurality of other processors ( OPs ) with a plurality of activation states, said  
30        OPs controlled by said system control processors, wherein an error in one of said OPs is detected by said system control processor set to an active activation state, said error is verified by said system control processor set to a standby activation state, and said system control processors change the activation state of the OP with an error to a reset activation state, said reset activation state indicating a non-functioning processor not  
35        integrated into the operations of the device.

22. In a computer system, said system including a plurality of system control processors, each said system control processor with a plurality of activation states, said system control processors controlling a plurality of other processors ( OPs ) in said system, each said OP with a plurality of activation states, a method, comprising the steps of:

providing a reset function for said system control processors enabling said system control processors to change the activation state of other system control processors and OPs;

setting the activation state of a system control processor to active, said active state indicating a functioning processor fully integrated into system operations;

setting the activation state of a system control processor to standby, said standby activation state indicating a functioning processor partially integrated into said system operations;

detecting an error in one of said OPs with said system control processor set to an active activation state;

detecting said error in one of said OPs with said system control processor set to a standby activation state; and

altering the activation state of said OP using at least one of said system control processor set to an active activation state and said system control processor set to a standby activation state.

23. In a computer system, said system including a plurality of components, said components including a system control processor with a plurality of activation states set to an active activation state, said active activation state indicating a functioning processor fully integrated into system operations, a system control processor with a plurality of activation states set to a standby activation state, said standby activation state indicating a functioning processor partially integrated into said system operations, and a system component with a reset function, said reset function enabling said system component to change the activation state of a system control processor, said system control processors controlling a plurality of other processors ( OPs ) in said system, a method, comprising the steps of:

detecting an error in said system control processor set to an active activation state with said system control processor set to a standby activation state;

attempting and failing to verify said error in said system control processor set to an active activation state with said system component with a reset function; and

altering the activation state of said system control processor set to a standby activation state using at least one of said system control processor set to an active activation state and said system component with a reset function.